

What is claimed is:

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1. A method of treating a malignant solid glioma in a human or animal using a multi-modality therapy, the solid glioma defining a parental tumor strain, the therapy comprising the steps of:

- 5 (a) surgically excising cells of the solid glioma;
- (b) altering said excised cells by genetic modification to enhance the immunogenicity of the altered cells;
- 10 (c) subjecting the solid glioma to a radiation therapy method while limiting the radiation dose received concomitantly by contiguous normal tissue to clinically tolerable levels; and
- 15 (d) subjecting said human or animal to an immunotherapy composed of introduction of said altered cells into said human or animal using multiple sequenced injections.

2. The treatment method of claim 1 wherein the mass of the solid glioma is at least substantially reduced prior to step (a) using surgical techniques.

20 3. The treatment method of claim 1 wherein the mass of the solid glioma is at least substantially reduced prior to step (a) using radiotherapeutic techniques.

25 4. The treatment method of claim 1 wherein the mass of the solid glioma is at least substantially reduced prior to step (a) using surgical and radiotherapeutic techniques.

5. The treatment method of claim 1 wherein the radiation dose received by normal tissue adjacent the solid glioma is in the range of 10 - 13 Gy from low-LET radiation or a total of 10 - 13 Gy-Eq from any combination of low-LET and high-LET radiations.
- 5 6. The treatment method of claim 1 wherein step (b) includes lethally irradiating the cells in vitro to render them incapable of sustained clonogenic growth in vivo.
7. The treatment method of claim 1 wherein step (c) includes subjecting the solid glioma to LINAC radiation.
- 10 8. The treatment method of claim 1 wherein the altered cells are cultivated to provide a large number of identical, genetically modified cells for use in step (c).
9. The treatment of claim 1 wherein the altered cells of step (b) are mixed in an immunogenic adjuvant suited for injection in step (c).
- 15 10. The treatment method of claim 1 wherein step (c) is implemented upon completion of step (a).
11. The treatment method of claim 1 wherein the radiation therapy is completed in less than a few hours after completion of step (a).
12. The treatment method of claim 1 wherein the radiation therapy
20 is completed in less than a few days after completion of step (a).
13. The treatment method of claim 1 wherein the radiation therapy is completed within fewer than ten weeks after completion of step (a).

14. A method of treating a malignant solid glioma in a human or animal using a multi-modality therapy comprising the steps of:

- (a) surgically excising cells of the solid glioma;
- (b) genetically modifying said excised cells to enhance the immunogenicity of said genetically modified cells;
- (c) altering the genetically modified cells to render the altered cells incapable of sustained clonogenic propagation;
- (d) subjecting the solid glioma to LINAC radiation therapy while limiting the radiation dose received concomitantly by contiguous normal tissue to clinically tolerable levels; and
- (e) subjecting said human or animal to an immunotherapy composed of introduction of said altered cells into said human or animal using multiple sequenced injections.

15. A method of treating a malignant solid glioma in a human or animal using a multi-modality therapy comprising the steps of:

- (a) surgically excising cells of the solid glioma;
- (b) genetically modifying said excised cells to enhance the immunogenicity of said genetically modified cells;
- (c) altering the genetically modified cells to render the altered cells incapable of unlimited clonogenic propagation;
- (d) subjecting the solid glioma to LINAC radiation therapy while limiting the radiation dose

received concomitantly by contiguous normal tissue to clinically tolerable levels; and

- (e) subjecting said human or animal to an immunotherapy composed of introduction of said altered cells into said human or animal using multiple sequenced injections.

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